

Appendix I: Stormwater Retrofit Inventory and Assessments

Note: The detailed analysis and maps of each site is available upon request.

For the Lower Cedar River, Coal Creek, and May Creek Basins of the Cedar River/Lake Washington Watershed

This assessment provides an overview of the stormwater retrofit opportunities identified by geospatial analysis and field investigations within the Lower Cedar River, May Creek, and Coal Creek basins. It addresses current land use, contributing land areas, soil types, treatment options, advantages, and potential obstacles, and ancillary environmental benefits within the study area. Currently, regulators have set limits on the applicability of stormwater retrofits located outside the highway right-of-way to flow control only. Currently, water quality treatment still must occur at the highway's discharge point unless a water quality trading program, total maximum daily load, or water quality offset is established within specific watersheds.

The SR 405 North Renton corridor is generally characterized as highly urbanized. Much of the development in the affected watersheds occurred prior to institution of stormwater and critical areas regulations. As a result, most stormwater runoff from non-highway land uses is conveyed directly to streams or Lake Washington by an elaborate network of underground pipes. In some cases, such as the North Renton/Johns Creek drainage analysis unit, nearly all surface water drainage is in the form of engineered conveyances with surface streams being largely eliminated by historic land development practices. There are several short streams that are essentially backwater areas of Lake Washington. With the exception of the Cedar River, Coal Creek, May Creek, and some tributaries there is little viable fish habitat within the most of the drainage systems in the North Renton project area. Soils are quite diverse throughout the corridor, ranging from coarse glacial outwash deposits in the southern end of the project to highly impervious clay soils north of May Creek.

Cedar River Watershed – The Cedar is a very large complex watershed that is highly regulated. Stormwater detention may not be needed for the Lower Cedar River, but this is a policy/regulatory issue.

High Technical Feasibility Retrofits

SW2: SE 162nd Ave/Cascade Park – SE 162nd Ave is gated and provides access to Cascade Park in the Tiffany neighborhood. The contributing land area is 32 acres and is all high density residential neighborhoods, approximately 45% TIA, 40% lawn, and 15% forest. There is plenty of open space for a stormwater detention facility and would be an ideal location for an Indian Creek-type facility that discharges to Ginger Creek, a tributary to the Cedar River.

SW5: Mt. Olivet NE 4th St. Quarry – An abandoned quarry provides an excellent opportunity to reroute the stormwater from the main stormwater conveyance located along NE 4th St. to the quarry, where it can be infiltrated because of the outwash soils located at the site. Since the quarry is located within Renton's Zone 2 aquifer protection area, water quality treatment would also be needed. The contributing land area is mixed

residential, commercial, and industrial and is 260 acres. The estimated TIA is 35%, with 55% grass, and 10% forest.

SW7: West Fork Maplewood Creek – The ideal parcel for a stormwater detention facility (5182100020), located due south of NE 4th St. just east of its intersection with Union Ave. is available and may be short-platted in the near future. The parcel is currently undeveloped and consists mostly of invasive blackberries and knotweed. The contributing land area is 87 acres and consists of dense commercial and residential properties. The estimated TIA is 50%, with 35% lawns and 15 forest.

Moderate Technical Feasibility Retrofits

SW3: Royal Hill Drive SE and Lake Youngs Way SE – There is land currently available near the discharge point to Ginger Creek but this is an area with rapid residential development. Much of the open land is beneath high tension power lines, which may be problematic for constructing stormwater control facilities. The land is entirely dense residential and roads, 62 acres total. The estimated land use is 35% TIA, 30% lawns, and 35% forest.

Low Technical Feasibility Retrofits

SW1: SE164th and 125th Ave SE - Similar to SW2 in setting (next to Cascade Park), except there doesn't appear to be enough available head to drive stormwater flows through a detention facility. The discharge point has very soggy ground and may be a historic wetland.

SW4: Maple Valley Highway – Land is not available at or near the discharge point and is likely in a historic floodplain. Very shallow groundwater is likely.

SW6: NE 3rd/NE 4th – The ideal location for a stormwater facility is the current location of a water tower, dense residential development, and also has very steep slopes

North Renton/Johns Creek Watershed – This is a highly urbanized area. All stormwater conveyances are underground pipes. Johns Creek as it currently exists is essentially a backwater area for Lake Washington and may not need flow control.

Moderate Technical Feasibility Retrofits

SW9: Edmonds Ave NE/NE Sunset Blvd – There is a small teriyaki restaurant (that may be permanently closed) which may provide enough area for locating an infiltration pond or bioretention area. The rest of the drainage, 156 acres total is almost completely built-out.

Low Technical Feasibility retrofits

SW8: N. 8th St/Sunset Blvd – This area has very steep slopes and no land appears to be available to construct stormwater control facilities. Additionally, being proximal to SR 405, there is likely no differential cost savings.

SW10: Lake Washington/SR 405 – The only available land is located down-gradient of SR 405 (Fry's Electronics parking lot), which does not satisfy one of the current

regulatory specifications. It is possible to create a regional stormwater facility at Fry's that could handle most of the drainage (345 acres total) from North Renton and SR 405.

May Creek Watershed

High Technical Feasibility retrofits

SW17: SE 80th Place/118th Ave SE – The prime parcel for a stormwater facility is currently open woodland and would be an ideal location for an Indian Creek-type facility, where the stormwater facility is incorporated into the landscape and designed for use as parkland and educational purposes. The drainage area discharges to the headwaters of Gypsy Creek, which has been identified as having significant streambank erosion problems (via conversations w/ Fritz Tim, Newcastle Public Works). The land area is 66 acres and consists of newer moderate density residential neighborhoods, 4 units per acre. Land use is estimated at 35% impervious, 50% lawns, and 15% forest.

Low Technical Feasibility retrofits

SW11: Union Ave. NE/Sunset Blvd. South – The area is entirely built-out with dense residential and commercial development. Honey Creek appears to be very highly degraded in this urbanized setting

SW12: Union Ave. NE/Sunset Blvd. North – Very similar to SW11, the area is completely built-out.

SW13: Edmonds Ave. NE/NE 27th St. – Land is available (May Creek Park), but very steep slopes (200+' bluff) makes construction of stormwater facilities not technically feasible.

SW14: SE 93rd Cul-de-sac – No land is available, consisting of all residential neighborhoods.

SW 15: SW Lake Boren – The ideal land parcel for a stormwater facility has very steep slopes and is also the location of a petroleum pipeline and power lines.

Lake Washington Watershed

Low Technical Feasibility retrofits

SW16: SW Kenndale – This area is located down-gradient of SR 405, which disqualifies it from future consideration.

SW19: SW Newport Hills – This area is completely built-out with residential properties.

Coal Creek Watershed

High Technical Feasibility retrofits

SW23: Lake Heights South – There is a portion of the school yard that is a natural depression and would be a good site for a stormwater detention facility. The stormwater facility could possibly provide a good educational opportunity and is located near the headwaters of a fish-bearing stream (Newport Hills Creek). The drainage area is 80 acres and consists of residential areas and a school. The TIA is estimated at 25%, with 50% grass and 25% forest.

SW27: NW NW SW Section 22 – This location has an ideal combination of a large contributing drainage area (103 acres), available open land, and moderate slopes. The proposed facility would discharge to the in-line sediment pond located next to the point where Coal Cr. Parkway crosses Coal Creek. The drainage is all from medium-density residential neighborhoods, 35% TIA, 25% grass, and 40% forest.

Moderate Technical Feasibility retrofits

SW21: Newport Hills SE – The area is completely built out and the remnant of Newport Hills Creek is all culverted. There is an unused parking lot behind a grocery store along 119th Ave SE that is in a topographic depression and may provide enough room for a regional detention facility, but space is tight.

SW26: Somerset/Eastgate – This drainage area discharges directly to Coal Creek Park and has created a steep erosional gully at its discharge point. At its present location, a stormwater detention facility would not be feasible due to its proximity to Coal Creek itself, but there appears to be open land directly to the east of the discharge which may be suitable for a facility. Stormwater would need to be diverted from its current discharge point to the available land, but there is ample available head to do so. The drainage area is very large, 230 acres, and consists of medium density residential neighborhoods, 35% TIA, 30% lawns, and 35% forest.

Low Technical Feasibility retrofits

SW20: Newport Hills North – This area is completely built-out with residential properties.

SW22: Lake Heights North – This area is completely built-out with residential properties.

SW24: N/2 NE Section 21 – This area is completely built-out with residential properties.

SW25: E/2 NE NE Section 28 - The discharge pipe could not be located, but the area has very steep slopes and would not be a feasible location for stormwater facilities.

SW 28: NW NE NW Section 27 - This area is completely built-out with residential properties.

SW 29: NW NW NE Section 27 – A stormwater detention pond already exists at this discharge. A newish flow control stack pipe is evidence that the pond has been retrofitted.

SW 30: NE NE NE Section 27 – A stormwater detention facility already exists at this site. The facility appears to be intended for flow control, no permanent wet pool is possible.

SW31: C W/2 NW Section 26 - This area is completely built-out with moderate-density residential properties and also has very steep slopes.

SW 32: SE SW SE Section 23 - This area is completely built-out with moderate-density residential properties and also has very steep slopes.